## Claims

1.      (Currently Amended)  A motion controlled handheld device comprising:

a display having a viewable surface and operable to generate an image;

a motion detection module operable to detect motion of the device within three dimensions and to identify components of the motion in relation to the viewable surface; and

a motion response module having a first mode of operation and a second mode of operation;

the motion response module operable in the first mode of operation to monitor the motion of the device, to determine that the motion matches a predetermined mode selection trigger by detecting stabilization of the components of the motion, and, in response to determining that the motion matches the predetermined mode selection trigger, to measure a baseline orientation of the device based on measurements of the components, and to switch to the second mode of operation;

the motion response module operable in the second mode of operation to monitor the motion of the device, to determine movement of the device in relation to the baseline orientation using the components of the motion, and to modify the image in response to the movement.


2.      (Canceled)


3.      (Currently Amended)   The motion controlled handheld device of Claim 1, wherein:

the mode selection trigger comprises an engagement gesture defined by a particular movement of the device with respect to a first position of the device; and

the motion response module is further operable to determine that the motion matches the predetermined mode selection trigger by:

tracking motion of the device matching to the engagement gesture; and

detecting stabilization of components of the motion of the device following detection of the engagement gesture.

4.     (Original)   The motion controlled handheld device of Claim 1, wherein the motion response module is further operable in the first mode of operation to disregard motions that do not match the predetermined mode selection trigger.

5.     (Original)   The motion controlled handheld device of Claim 1, wherein the motion response module is further operable, upon switching to the second mode of operation, to detect a first motion after entering the second mode of operation, to determine that the first motion fails to match to a predefined set of motions, and to switch to the first mode of operation in response to determining that the first motion fails to match.

6.     (Original)   The motion controlled handheld device of Claim 1, further comprising:

a gesture database comprising a plurality of gestures, each gesture defined by a motion of the device with respect to a first position of the device; and

a gesture mapping database mapping each of the gestures to a corresponding command; and wherein

the motion response module is further operable in the first mode of operation to compare the motion of the device against an engagement gesture to determine whether the motion matches the predetermined mode selection trigger; and

the motion response module is further operable in the second mode of operation to match the motion of the device against the gestures to determine a received gesture, to identify the corresponding command mapped to the received gesture, and to execute the identified command to modify the current image.

7.      (Original)    The motion controlled handheld device of Claim 6, further comprising:

a first accelerometer operable to detect acceleration along a first axis;

a second accelerometer operable to detect acceleration along a second axis, the second axis perpendicular to the first axis; and

a third accelerometer operable to detect acceleration along a third axis, the third axis perpendicular to the first axis and perpendicular to the second axis; and wherein:

the gesture database further defines each of the gestures using a sequence of accelerations;

the motion detection module is further operable to detect motion of the device using accelerations measured by the first accelerometer, the second accelerometer, and the third accelerometer; and

the motion response module is further operable to match the accelerations measured by the motion detection module against gesture definitions in the gesture database.

8.      (Currently Amended)    A method for controlling a handheld device comprising:

    generating an image on a viewable surface of the handheld device;

    detecting motion of the device within three dimensions;

    identifying components of the motion in relation to the viewable surface;

    in a first mode of operation:

        monitoring the motion of the device;

        determining that the motion matches a predetermined mode selection trigger by detecting stabilization of the components of the motion; and

        in response to determining that the motion matches the predetermined mode selection trigger, measuring a baseline orientation of the device based on measurements of the components and switching to a second mode of operation;

    in the second mode of operation:

        monitoring the motion of the device;

        determining movement of the device in relation to the baseline orientation using the components of the motion; and

        modifying the image in response to the movement.


9.      (Canceled)


10.     (Original)   The method of Claim 8, wherein the mode selection trigger comprises an engagement gesture defined by a particular movement of the device with respect to a first position of the device, the method further comprising:

    tracking motion of the device matching to the engagement gesture; and

    detecting stabilization of components of the motion of the device following detection of the engagement gesture.


11.     (Original)   The method of Claim 8, further comprising, in the first mode of operation, disregarding motions that do not match the predetermined mode selection trigger.


12.     (Original)   The method of Claim 8, further comprising, upon switching to the second mode of operation:

detecting a first motion after entering the second mode of operation;

determining that the first motion fails to match to a predefined set of motions; and

switching to the first mode of operation in response to determining that the first motion fails to match.

13.    (Original) The method of Claim 8, further comprising:

maintaining a gesture database comprising a plurality of gestures, each gesture defined by a motion of the device with respect to a first position of the device; and

maintaining a gesture mapping database mapping each of the gestures to a corresponding command; and wherein

in the first mode of operation, comparing the motion of the device against an engagement gesture to determine whether the motion matches the predetermined mode selection trigger; and

in the second mode of operation, matching the motion of the device against the gestures to determine a received gesture, identifying the corresponding command mapped to the received gesture, and executing the identified command to modify the current image.

14.    (Original) The method of Claim 13, wherein:

the gesture database further defines each of the gestures using a sequence of accelerations; the method further comprising:

detecting acceleration along a first axis;

detecting acceleration along a second axis, the second axis perpendicular to the first axis; and

detecting acceleration along a third axis, the third axis perpendicular to the first axis and perpendicular to the second axis;

detecting motion of the device using accelerations measured by the first accelerometer, the second accelerometer, and the third accelerometer; and

matching the accelerations against gesture definitions in the gesture database to identify potential indicated ones of the gestures.

15.     (Currently Amended)   Logic for controlling a handheld device, the logic embodied as a computer program stored on in a computer readable medium and operable when executed to perform the steps of:

generating an image on a viewable surface of the handheld device;

detecting motion of the device within three dimensions;

identifying components of the motion in relation to the viewable surface;

in a first mode of operation:

monitoring the motion of the device;

determining that the motion matches a predetermined mode selection trigger by detecting stabilization of the components of the motion; and

in response to determining that the motion matches the predetermined mode selection trigger, measuring a baseline orientation of the device based on measurements of the components and switching to a second mode of operation;

in the second mode of operation:

monitoring the motion of the device;

determining movement of the device in relation to the baseline orientation using the components of the motion; and

modifying the image in response to the movement.


16.     (Canceled)


17.     (Currently Amended)   The logic of Claim 15, wherein the mode selection trigger comprises an engagement gesture defined by a particular movement of the device with respect to a first position of the device, the logic further operable when executed to perform the steps of:

tracking motion of the device matching to the engagement gesture; and

detecting stabilization of components of the motion of the device following detection of the engagement gesture.


18.     (Original)   The logic of Claim 15, further operable, in the first mode of operation, to disregard motions that do not match the predetermined mode selection trigger.

19.    (Original)  The logic of Claim 15, further operable, upon switching to the second mode of operation, to:

detect a first motion after entering the second mode of operation;

determine that the first motion fails to match to a predefined set of motions; and

switch to the first mode of operation in response to determining that the first motion fails to match.

20.    (Original)  The logic of Claim 15, further operable when executed to perform the steps of:

maintaining a gesture database comprising a plurality of gestures, each gesture defined by a motion of the device with respect to a first position of the device; and

maintaining a gesture mapping database mapping each of the gestures to a corresponding command; and wherein

in the first mode of operation, comparing the motion of the device against an engagement gesture to determine whether the motion matches the predetermined mode selection trigger; and

in the second mode of operation, matching the motion of the device against the gestures to determine a received gesture, identifying the corresponding command mapped to the received gesture, and executing the identified command to modify the current image.

21.    (Original)  The logic of Claim 20, wherein:

the gesture database further defines each of the gestures using a sequence of accelerations; the logic further operable when executed to perform the steps of:

detecting acceleration along a first axis;

detecting acceleration along a second axis, the second axis perpendicular to the first axis; and

detecting acceleration along a third axis, the third axis perpendicular to the first axis and perpendicular to the second axis;

detecting motion of the device using accelerations measured by the first accelerometer, the second accelerometer, and the third accelerometer; and

matching the accelerations against gesture definitions in the gesture database to identify potential indicated ones of the gestures.

22.    (Currently Amended)  A motion controlled handheld device comprising:

means for generating an image on a viewable surface of the handheld device;

means for detecting motion of the device within three dimensions;

means for identifying components of the motion in relation to the viewable surface;

means for, in a first mode of operation:

monitoring the motion of the device;

determining that the motion matches a predetermined mode selection trigger by detecting stabilization of the components of the motion; and

in response to determining that the motion matches the predetermined mode selection trigger, measuring a baseline orientation of the device based on measurements of the components and switching to a second mode of operation;

means for, in the second mode of operation:

monitoring the motion of the device;

determining movement of the device in relation to the baseline orientation using the components of the motion; and

modifying the image in response to the movement.